UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/924,785	09/05/1997	RICHARD W. PRATT	785	4422

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EXAMINER
PRIETO, BEATRIZ

ART UNIT	PAPER NUMBER
2152	

DATE MAILED: 10/02/2002   3 1

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	08/924,785	PRATT, RICHARD W.
	Examiner	Art Unit	
	B. PRIETO	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _19 July 2002_ .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-46_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-46_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

Detailed Action

1. This communication is in response to amendment filed 07/19/02, claims 1-46 remain pending.

2. Rejection under 35 U.S.C. §112 second paragraph on office action mailed 05/01/02 is withdrawn. However, specifications do not contain a recitation or written description of a "network device control software program". According to applicant's specification a "software program compiler (146)" and "software program (180)" seem to be the only software program elements disclosed throughout the specification. Therefore for the purposes of examination although not require, claimed "network device control software" refers to disclosed software program (180).

3. Quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this office action may be found in previous office action.

4. Claims 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hogan et. al. (Hogan) U.S. Patent No. 5,778,368 in view of Palay et. al. (Palay) U.S. Patent No. 5,613,120.

Regarding claim 1, Hogan teaches a system/method comprising repository units comprising;

network device control software program (software programs) (col 17/lines 10-41, comprising software program files for controlling target computers (network devices), software program files including binary software utility programs and repository units, col 20/lines 34-52), and

embedded software files included in repository units (col 7/lines 25-34, repository unit built using a compiler/linker/loader col 11/lines 32-33),

said repository unit may be downloaded to a target computer (network device) (downloadable to a network device operating systems for execution, col 7/lines 54-65, download to configure network device, col 9/lines 17-36);

said repository unit is transmitted over a network to a remote client machine (9) (remote client, col 11/lines 1-13, downloading, col 8/lines 27-43, 59-col 9/lines 13, downloading over a network);

enable remote client's machine to remotely configure the network device (install software on remote target computer, col 2/lines 61-col 3/line 4, configure the network device col 9/lines 3-13, configuring network devices with associated software programs, col 17/lines 14-47);

the repository unit including;

establishing a communications link between the remote client and software program (network device control software program), where the software programs (e.g. software utility programs) in the downloadable unit establishing a link operation with the embedded software an allows the user via interface means to interface and interact with the embedded software, perform the task of the embedded software and has means for connecting with multiple application (col 21/lines 1-10);

component for enabling a user to communicate with said repository unit (user interface means to enabling communication between the user and said unit, col 20/lines 34-52, interface for managing (e.g. control to perform specific functions) and configuring the network device, col 5/lines 12-15, i.e. the functional network device, col 8/lines 15-24), and

component for managing and configuring the network device (configuration files for configuring and managing network devices col 17/lines 11-41, configure and manage said network device, col 20/lines 53-67 to specific perform functions);

component for loading said repository unit onto a network device (loading on network device, col 14/lines 1-6, component loader for checkout source code, col 16/lines 2-3, download utility file, col 17/lines 13-15);

however Hogan does not explicitly teach embedding software (downloadable unit) into the binary file of a compiled software program;

Palay teaches embedding software classes in an object file generated by a compiler from a source file, (embedding class instances col 8/lines 56-67 in a object file produced by a compiler from a source file, col 12/lines 6-25, classes information is class instances of the method, source file is a program, col 7/lines 34-40);

It would have been obvious to one ordinary skilled in the art at the time the invention was

made to include compiling the software program into binary files generated by a compiler's output, as taught by Palay, supporting compiler/link/loader tool, taught by Hogan, to compile a source program file generating a source program binary file, embed a class instance in said binary file forming a unit downloadable on the network device, motivation would be to make these units are independent of specific architecture of platform of the computer system where they are to be executed, enabling the modification of class method definitions and implementations without the need for recompilations isolating the classes without imposing performance penalty and without limiting the software language being used.

5. Claims 2, 4-15, 19-28, 30-38, 40-43, and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan et. al. (Hogan) U.S. Patent No. 5,778,368 in view of Palay et. al. (Palay) U.S. Patent No. 5,613,120 in further view of Lindholm U.S. Patent No. 5,859,982.

Regarding claims 2 and 4, further downloadable unit includes more than one unit (Hogan: a combination of software program and embedded software, col 7/lines 62-65, downloading units, col 13/lines 51-65), however the above teachings does not explicitly teach wherein said downloadable unit includes embedding Java ™ class;

Lindholm teaches where downloadable unit includes embedding Java ™ class (Lindholm, col 1/lines 39-65, col 5/lines 34-59, Java TM classes, col 4/lines 47-56);

It would have been obvious to one ordinary skilled in the art at the time the invention was made to include embedding Java ™ class in said downloadable units, supported by Palay's teachings of embedding software classes in a binary file, software source files independent of the programming language used, motivation would be further enhance downloadable units making them independent of the specific architecture or platform of the target device, enabling these to be directly loaded into the memory in run-time, freeing target device from handling the cycle of installation, configuration upgrade typical of software products.

Regarding claims 5-6, bundling more than one downloadable unit into a downloadable unit bundle (Hogan, bundle: col 7/lines 41-46, loader: col 11/ines 32-33), building downloadable units according to a function (Hogan: col 10/lines 24-36).

Regarding claims 7-8, bundling more than one downloading unit according to a version (Hogan: col 9/lines 40-54), bundling sharable downloadable units into a default bundle (Hogan: col 8/lines 43-52).

Regarding claim 9, software programs include operating system executing on the network device (Hogan: col 7/lines 54-64).

Regarding claim 10-11, network device includes a router (Hogan: col 17/lines 1-25), created table of contents for the downloadable unit bundle (Hogan: col 13/lines-col 14/line 8).

Regarding claim 12, embedding downloadable unit into a binary file (Hogan: col 7/lines 28-34, Lindholm, embedded software col 18/lines12-22 into a binary file readily executed on a remote client device col 4/lines 15-col 6/line 4, col 12/lines 29-43).

Regarding claim 13, as discussed on claim 1 and additionally, software program comprising

an utility software program compiled into a binary utility files to be downloaded to the network device (e.g. binary software utility programs include in the repository units, col 20/lines 34-52),

downloaded units for managing the network device (configuration files for configuring and managing network devices col 17/lines 11-41, configure and manage network device to emulate environment (i.e. software functionalities) on said network device, col 20/lines 53-67),

a web server (A) for communicating with the remote client (9) and for transmitting the embedded downloadable unit to the remote client in response to said remote client's request (access via said server, col 9/lines 16-36),

receiving from a remote client for downloadable units, downloadable units comprising software programs for managing network devices, said software programs including binary utility software program (Hogan: software programs col 17/lines 10-41, comprising software files for controlling and configuring network devices, embedded software col 7/lines 25-34 or any combination of files, to form a repository unit, built using a compiler/linker/loader col 11/lines 32-33, i.e. loading by the loader the binary file from the compiler of software programs

e.g. binary software utility programs include in the repository units, col 20/lines 34-52, and linked by the linker with the embedded software, to form a repository unit).

Regarding claim 14-15, and 17, these claims are the system associated with the method disclosed on claims 10, 2 and 5, respectively same rationale is applicable.

Regarding claim 18, downloadable units have been combined into downloadable unit bundles (Hogan: col 7/lines 28-34).

Regarding claim 19-22, these claims describe the system associated with the method discussed on claims 6-7, 9-10, respectively same rationale is applicable.

Regarding claims 23-24, the web server communicated with the remote client using an Internet file transfer protocol (Hogan: col 8/lines 59-col 9/line 3), web server communicates with the remote client using an Internet protocol (Hogan: col 8/lines 59-col 9/line 6, web server protocols, col 11/lines 14-17)

Regarding claim 25, the software includes an extractor for extracting the embedded software and software programs comprising the downloadable units (Hogan; un-packer col 7/lines 41-46, checkout application, col 15/lines 64-67).

Regarding claim 26, software programs are currently executing on the network device (Hogan-col 12/lines 11-25).

Regarding claim 27, the claim comprises the system consisting of the means for performing the method claimed on claim 1, same rationale is applicable.

Regarding claim 28, this claim is substantially the same limitation discussed on claims 2, and 15, same rationale is applicable.

Regarding claim 30, this claim is substantially the same limitation discussed on claims 5, and 17, same rationale is applicable.

Regarding claim 31, this claim is substantially the same limitation discussed on claims 17-18, same rationale is applicable.

Regarding claim 32, this claim is substantially the same limitation discussed on claims 21, and 26, same rationale is applicable.

Regarding claim 33, this claim is substantially the same limitation discussed on claims 10, and 14, same rationale is applicable.

Regarding claims 34-35, establishing a communication link includes using a URL and opening an Internet connection (Hogan: col 8/lines 59-col 9/line 6, HTTP-based communication link, selecting from a web page, col 9/lines 14-26, CGI/server HTML accessed-based, col 11/lines 20-24, col 7/lines 50-53, where a user clicks, col 14/lines 56-col 15/line 13).

Regarding claim 36, claim is substantially the same as claim 23, as discussed, same rationale is applicable.

Regarding claim 37, communication link includes a web engine (Hogan: col 11/lines 14-24, web server engine).

Regarding claim 38, Java ™ virtual machine (Lindholm, col 5/lines 34-59).

Regarding claims 40 and 43, substantially the same as discussed above on claims, additionally,

locating a downloadable unit which corresponds to the request (Hogan search result of requested downloadable units, col 14/lines 9-col 15/line 13), downloadable unit including:

software programs (network device control software programs), col 17/lines 10-41, embedded software, col 7/lines 25-34, software programs including binary software utility

programs, col 11/lines 32-33, col 20/lines 34-52, linked with the embedded software), as discussed above,

software program within downloadable unit, enables user to perform request (Hogan: user interface to enabling communication between the user and the downloadable units, col 20/lines 34-52, interface for managing (e.g. control to perform specific functions) and configuring the network device, col 5/lines 12-15, repository station, i.e. the functional (client) network device, col 8/lines 15-24),

extracting the downloadable unit from the binary file and forwarding the downloadable unit to the remote client for storage on said remote client (Hogan: select contents of downloadable unit, col 16/lines 61-62, contents of said unit including binary files, (Hogan: binary software utility programs include in the repository units, col 20/lines 34-52, downloads and unpacks, col 8/lines 59-col 9/line, forwarding to remote client computer).

Regarding claim 41, this is the system and means associated with the method discussed on claim 40, same rationale is applicable.

Regarding claim 42 this is the computer-storage medium storing the program code for performing the method on claim 40, same rationale is applicable.

Regarding claim 45-46, software program (network control software program) includes a list of available functions and downloadable units (Hogan: col 13/lines 11-col 14/line 8).

6.   Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan-Palay in view of Lindholm U.S. Patent No. 5,859,982 in further view of Nakagawa et. al. (Nakagawa) U.S. Patent No. 5,832,911.

Regarding claim 44, substantially the same as discussed on claims 1, 13, 27, 40, 41, 42, and 43, further the above teachings do not explicitly each receiving a new downloadable unit, retrieving an old downloadable unit comprising, as discussed above an embedded software in a software program binary file, and substituting an old downloadable unit with a new downloadable unit,

and loading said new downloadable unit comprising new embedded software and new software program binary file;

Nakagawa teaches a system/method related to software distribution/maintenance with which a software distributors can provide and update for a number of users software/services over a network, for systematically distributed/maintained, re-installing and upgrading via a network connecting many distributor and users of client/server software, wherein a client program automatically updates the software to the latest version according to the update instruction information when it is received (Nakagawa: col 1/line 13-col 5/line 10, abstract), disclosing means for retrieving the network device control software program binary file having an embedded old downloadable unit for performing an old service from a network device (Nakagawa: col 22/lines 3562);

It would be obvious to one ordinary skilled in the art at the time the invention was made to modify exist system with means for retrieving the network device control software program binary file having an embedded old downloadable unit for performing an old service from a network device, as taught by Nakagawa, motivation would be to further enhance existing means for adding, upgrading services to include a software distribution and maintenance means obtainable over a network for other various types of software such as product software, shareware, embedded software, freeware, scientific prototype software, intra-office software, etc, in an immediately operable form.

7.   Claims 3, 16, 29 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan-Palay-Lindholm in view of Nakagawa et. al. (Nakagawa) U.S. Patent No. 5,832,911 in further view of Gish U.S. Patent 5,768,510.

Regarding claim 3, 16, 29, and 39, however the above teachings do not explicitly teach wherein the step of obtaining a downloadable unit includes embedding ActiveX ™ control and associated browser capabilities;

Gish teaches a system/method distributed computer system comprising client computer software, server computer and a network for connecting the client computer to the server computer which utilize an execution software code configured to couple the server computer and

the client computer via the network, disclosing means for obtaining downloading units (applets) using ActiveX ™ control technology for embedding software into downloadable units installing and configuring associated browser capabilities (Gish: col 15lline-col 16/line 8, col 16/lines 54-col 17/line 10);

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify existing system with means for obtaining a downloadable unit includes embedding ActiveX™ control and associated browser capabilities, as taught by Gish, motivation extend functionalities existing in Java (applets) technology to similar functions provided by ActiveX™ technologies, to give developers/designers to manufacture dynamic content for the Internet and network devices that work on multiple platforms, and are being widely supported, these small, fast components that enable developers to embed parts of software supported by a variety of programming languages, where one of ordinary skill in the art readily recognizes that ActiveX™ could be substituted for Java™ without undue experimentation to practice the invention.

Response to arguments

8.   Applicant argues (A), that each and every element claimed are not found nor suggested by the prior art of record, specifically, the prior art fails to teach a "network device", because the prior art's repository client is not remote from the client, as claimed.

In response to argument A, (i) prior art teaches that the repository client can be located any where locally and/or remote (Hogan: col 11/line 1-13), Hogan teaches transmission of a downloadable unit over the network to a remote client (remote client, col 11/lines 1-13, downloading, col 8/lines 27-43 to be executed on target computers, col 8/line 59-col 9/lines 13, downloading over a network) for configuring a target computer (remote client installing software on target computer, col 2/lines 61-col 3/line 4, configure the network device col 9/lines 3-13, configuring software programs, col 17/lines 14-47).

9.   Applicant argues (B), neither Hogan nor Lindholm teachings are in the same field of endeavor as instant application, because Hogan does not teach managing a network device from a remote client.

In response to argument B, (i) Hogan teaches configuring (managing) a network device from a remote client (install software on target computer, col 2/lines 61-col 3/line 4, configure the network device col 9/lines 3-13, configuring network devices with associated software programs, col 17/lines 14-47); (ii) instant application relates to the transmission of embedded software to a remote device, the execution of the transmitted software enables device to be managed and configured. Hogan teaches downloading software, embedded software or a combination of these to remote network target computer to be executed thereon configuring these with installed software, Lindholm teachings are related to the execution of software transmitted over the network, in this aspect Hogan and Lindholm are found to be in the same field of endeavor of instant application.

10.   Applicant argues (C), there is no motivation the combine the prior arts of record Lindholm with Hogan, because Lindholm is designed to solved problems that unlikely support any modification or combination with the Hogan reference.

In response to argument C, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

11.   Applicant argues (D), prior art of record both Hogan and Lindholm fail to each software that in embedded in a binary file of a software program as claimed.

In response to argument (D), Hogan teaches downloadable units including embedded software (col 7/lines 25-34, repository unit built using a compiler/linker/loader col 11/lines 32-33), Palay teaches embedding software (downloadable unit) into the binary file of a compiled software program (Palay: embedding class instances col 8/lines 56-67 in a object file produced by a compiler from a source file, col 12/lines 6-25, classes information is class instances of the method, source file is a program, col 7/lines 34-40).

12. Applicant arguments filed 07/28/02 have been fully considered but not rendered persuasive, rejection is maintained.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ex. Prieto, whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Mark H. Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6606. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Any response to this final action should be mailed to:

> **Box AF**
> Commissioner of Patents and Trademarks
> Washington, D.C. 20231

or Faxed to: (703) 746-7238 for TC 2100 Official After-final communications; please mark "EXPEDITED PROCEDURE", and (703) 746-7239 for other TC 2100 Official communications.
or: (703) 465-7240 for Non-Official, Draft communications, status query, please label "PROPOSED" or "DRAFT".

> **Or Telephone**:
> (703) 306-5631 for TC 2100 Customer Service Office.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

B. Prieto
GAU 2152
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Patent Examiner
September 28, 2002

ROBERT B. HARRELL
PRIMARY EXAMINER